

hot end SMA element and the cold side of the intermediate SMA element is in thermal communication with the hot side of the cold end SMA element.

2. The energy harvesting system of claim 1, wherein the intermediate heat engine is a first intermediate heat engine, and further comprising a second intermediate heat engine, including:

at least two rotatable pulleys;

a timing cable disposed about a portion the at least two rotatable pulleys and defining a timing pulley ratio;

a second intermediate SMA element disposed about the at least two rotatable pulleys and defining an SMA pulley ratio different than the timing pulley ratio, wherein the second intermediate SMA element has a hot side and a cold side; and

wherein the hot side of the second intermediate SMA element is in thermal communication with the cold side of the first intermediate SMA element and the cold side of the second intermediate SMA element is in thermal communication with the hot side of the cold end SMA element.

3. An energy harvesting system, comprising:

a hot region flowing in a first direction;

a cold region flowing in a second direction, substantially opposite of the first direction;

a first heat engine having a hot side and cold side, wherein the hot side communicates with the hot region at a first hot temperature and the cold side communicates with the cold region at a first cold temperature;

a second heat engine having a hot side and cold side, wherein the hot side communicates with the hot region at a second hot temperature, different than the first hot temperature, and the cold side communicates with the cold region at a second cold temperature, different than the first cold temperature; and

a third heat engine having a hot side and cold side, wherein the hot side communicates with the hot region at a third hot temperature, different than the first hot temperature and the second hot temperature, and the cold side communicates with the cold region at a third cold temperature, different than the first cold temperature and the second cold temperature.

4. The energy harvesting system of claim 3,

wherein the first hot temperature is greater than the second hot temperature, and the second hot temperature is greater than the third hot temperature; and

wherein the first cold temperature is greater than the second cold temperature, and the second cold temperature is greater than the third cold temperature.

5. The energy harvesting system of claim 4,

wherein a first temperature differential between the first hot temperature and the first cold temperature is generally equivalent to a second temperature differential between the second hot temperature and the second cold temperature; and

wherein a third temperature differential between the third hot temperature and the third cold temperature is generally equivalent to the second temperature differential.

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